		Pushing the Er	nvelope
		2007 Mathem	
		State Framev	works
Mississippi Mathem	atics		
Grade 5			
Activity/Lesson	State	Standards	
Types of Engines (pgs. 11-23)	MS	MA.5.4.b	Develop concepts and apply appropriate tools and techniques to determine units of measure. Convert units within a given measurement system to include length, weight/mass, and volume.
Types of Engines (pgs. 11-23)	MS	MA.5.4.d	Develop concepts and apply appropriate tools and techniques to determine units of measure. Select and apply appropriate units for measuring length, mass, volume, and temperature in the standard (English and metric) systems.
Chemistry (pgs. 25-41)	MS	MA.5.4.b	Develop concepts and apply appropriate tools and techniques to determine units of measure. Convert units within a given measurement system to include length, weight/mass, and volume.
Chemistry (pgs. 25-41)	MS	MA.5.4.d	Develop concepts and apply appropriate tools and techniques to determine units of measure. Select and apply appropriate units for measuring length, mass, volume, and temperature in the standard (English and metric) systems.
Physics and Math (pgs. 43-63)	MS	MA.5.2.a	Explain and analyze number relationships and functions using algebraic symbols, and demonstrate an understanding of the properties of the basic operations. Determine the value of variables in equations and inequalities, justifying the process.
		Pushing the Er	
		2007 Mathem	
		State Frame	vorks
Mississippi Mathem	atics		
Grade 6			
Activity/Lesson	State	Standards	
Chemistry (pgs. 25-41)	MS	MA.6.4.e	Apply geometric formulas and standard (English and metric) units of measurement in mathematical and real-life situations. Predict and calculate the volume of prisms.
Physics and Math (pgs. 43-63)	MS	MA.6.2.b	Use algebraic functions, patterns, and language across a variety of contexts. Complete a function table based on a given rule.

			Use algebraic functions, patterns, and language
			across a variety of contexts. State the following
Physics and Math	MO		properties using variables and apply them in
(pgs. 43-63)	MS	MA.6.2.d.1	solving problems: Zero property of multiplication
			Use algebraic functions, patterns, and language
			across a variety of contexts. State the following
			properties using variables and apply them in
Physics and Math			solving problems: Inverse properties of
(pgs. 43-63)	MS	MA.6.2.d.2	addition/subtraction and multiplication/division
			Use algebraic functions, patterns, and language
			across a variety of contexts. State the following
			properties using variables and apply them in
Physics and Math			solving problems: Commutative and associative
(pgs. 43-63)	MS	MA.6.2.d.3	properties of addition and multiplication
			Use algebraic functions, patterns, and language
			across a variety of contexts. State the following
Physics and Math			properties using variables and apply them in solving problems: Identity properties of addition
(pgs. 43-63)	MS	MA.6.2.d.4	and multiplication
(pgc. 10 00)	IVIO	1417 (1.0.2.0.1	and maniphodiem
			Use algebraic functions, patterns, and language
			across a variety of contexts. State the following
			properties using variables and apply them in
Physics and Math	MO	MA C O d 5	solving problems: Distributive properties of
(pgs. 43-63)	MS	MA.6.2.d.5	multiplication over addition and subtraction  Use algebraic functions, patterns, and language
			across a variety of contexts. Describe a rule for
Physics and Math			a function table using words, symbols, and
(pgs. 43-63)	MS	MA.6.2.e	points on a graph and vice versa.
			Apply geometric formulas and standard (English
			and metric) units of measurement in
Dharainn and Math			mathematical and real-life situations. Use scale
Physics and Math	MS	MA.6.4.d	factors to perform dilations and to solve ratio and proportion problems.
(pgs. 43-63)	IVIO	IVIA.0.4.u	and proportion problems.
		Pushing the E	nvelope
		2007 Mathen	
Mississinni Mathem	nation	State Frame	works
Mississippi Mathem Grade 7	latics		
Activity/Lesson	State	Standards	
•		-	Develop and apply the basic operations of
			rational numbers to algebraic and numerical
			tasks. Create and apply algebraic expressions
Dhusias as INA-4			and equations. State the following properties
Physics and Math	MS	MA 72 0 1	using variables and apply them in solving
(pgs. 43-63)	MS	MA.7.2.e.1	problems: Zero property of multiplication

Types of Engines (			polygons, circles, spheres, cones, pyramids,
Tunes of Engines (			perimeter, area, volume, and surface area of
			measures (to appropriate levels of precision),
			measuring tools to find length and angle
			situations. Use formulas and/or appropriate
			and apply various formulas in problem solving
			Understand measurable attributes of objects
Activity/Lesson	State	Standards	
Grades 7-8			
Mississippi Mathem	atics	State I faillet	
		State Framev	
		2007 Mathem	
		Pushing the Er	nvelone
(pgs. 43-63)	MS	MA.7.4.d	proportions.
Physics and Math			problems involving scale factors using ratios and
			other logical mathematical relationships. Solve
			statements about rules, equations, principles, or
			formulas in mathematics are generalized
			focus on real-world problems. Recognize that
			formulas to determine measurements with a
,			Apply appropriate techniques, tools, and
(pgs. 43-63)	MS	MA.7.2.e.5	over addition and subtraction.
Physics and Math			problems: Distributive properties of multiplication
			using variables and apply them in solving
			and equations. State the following properties
			tasks. Create and apply algebraic expressions
			rational numbers to algebraic and numerical
			Develop and apply the basic operations of
(pgs. 43-63)	MS	MA.7.2.e.4	multiplication
Physics and Math			problems: Identity properties of addition and
			using variables and apply them in solving
			and equations. State the following properties
			tasks. Create and apply algebraic expressions
			rational numbers to algebraic and numerical
			Develop and apply the basic operations of
(pgs. 43-63)	MS	MA.7.2.e.3	properties of addition and multiplication
Physics and Math			problems: Commutative and associative
			using variables and apply them in solving
			and equations. State the following properties
			tasks. Create and apply algebraic expressions
			rational numbers to algebraic and numerical
<u>u-J/</u>			Develop and apply the basic operations of
(pgs. 43-63)	MS	MA.7.2.e.2	addition/subtraction and multiplication/division
Physics and Math			problems: Inverse properties of
			using variables and apply them in solving
			and equations. State the following properties
			rational numbers to algebraic and numerical tasks. Create and apply algebraic expressions
			rational numbers to algebraic and numerical

Activity/Lesson	State	Standards	
Grades 8-9			
Mississippi Mathema	atics		
		State Framewo	orks
		2007 Mathema	ntics
	1	Pushing the Env	/elope
69-75)	MS	MA.7-8.PA.4.c	and composite or irregular figures.
Rocket Activity (pgs.			measures (to appropriate levels of precision), perimeter, area, volume, and surface area of polygons, circles, spheres, cones, pyramids,
			situations. Use formulas and/or appropriate measuring tools to find length and angle
			Understand measurable attributes of objects and apply various formulas in problem solving
Physics and Math (pgs. 43-63)	MS	MA.7-8.PA.4.c	polygons, circles, spheres, cones, pyramids, and composite or irregular figures.
			measuring tools to find length and angle measures (to appropriate levels of precision), perimeter, area, volume, and surface area of
			Understand measurable attributes of objects and apply various formulas in problem solving situations. Use formulas and/or appropriate
Physics and Math (pgs. 43-63)	MS	MA.7-8.PA.4.b	proportions, such as scaling and finding equivalent ratios.
			and apply various formulas in problem solving situations. Develop, analyze, and explain methods for solving problems involving
(pgs. 43-63)	MS	MA.7-8.PA.2.f	interpret slope as rate of change. Understand measurable attributes of objects
Physics and Math			expressions, solve linear equations and inequalities, and apply principles of graphing.  Given a linear graph, identify its slope as positive, negative, undefined, or zero, and
Physics and Math (pgs. 43-63)	MS	MA.7-8.PA.2.c	Apply properties to simplify algebraic expressions, solve linear equations and inequalities, and apply principles of graphing. Solve and check equations and inequalities using one variable.  Apply properties to simplify algebraic
Physics and Math (pgs. 43-63)	MS	MA.7-8.PA.1.c	Apply concepts and perform basic operations using real numbers in real-world contexts. Apply the concepts of Greatest Common Factor (GCF) and Least Common Multiple (LCM) to monomials with variables.
Chemistry (pgs. 25- 41)	MS	MA.7-8.PA.4.c	perimeter, area, volume, and surface area of polygons, circles, spheres, cones, pyramids, and composite or irregular figures.
			Understand measurable attributes of objects and apply various formulas in problem solving situations. Use formulas and/or appropriate measuring tools to find length and angle measures (to appropriate levels of precision),

			Demonstrate and apply various formulas in
			problem-solving situations. Solve real-world
			problems involving measurements (i.e.,
Chemistry (pgs. 25-			circumference, perimeter, area, volume,
41)	MS	MA.8-9.TA.4.a	distance, temperature, etc.).
41)	IVIO	IVIA.0-9. IA.4.a	Demonstrate and apply various formulas in
			problem-solving situations. Explain and apply
			the appropriate formula to determine length,
			midpoint, and slope of a segment in a
Chemistry (pgs. 25-			coordinate plane (i.e., distance formula,
41)	MS	MA.8-9.TA.4.b	Pythagorean Theorem).
41)	IVIO	IVIA.0-9. IA.4.D	Understand relationships between numbers and
			their properties and perform operations fluently.
			Apply the concept of Greatest Common Factor
Physics and Math			(GCF) and Least Common Multiple (LCM) to
(pgs. 43-63)	MS	MA.8-9.TA.1.d	monomials with variables.
(pgs. <del>1</del> 0-00)	IVIO	IVIA.059. IA. 1.U	Understand, represent, and analyze patterns,
			relations, and functions. Explain and illustrate
Physics and Math			how changes in one variable may result in a
(pgs. 43-63)	MS	MA.8-9.TA.2.b	change in another variable.
(pgs. 40 00)	IVIO	1017 (.0 0.17 (.2.0	onange in another variable.
			Understand, represent, and analyze patterns,
			relations, and functions. Classify and determine
Physics and Math			degree of a polynomial and arrange polynomials
(pgs. 43-63)	MS	MA.8-9.TA.2.i	in ascending or descending order of a variable.
(1-5			Demonstrate and apply various formulas in
			problem-solving situations. Explain and apply
			the appropriate formula to determine length,
			midpoint, and slope of a segment in a
Physics and Math			coordinate plane (i.e., distance formula,
(pgs. 43-63)	MS	MA.8-9.TA.4.b	Pythagorean Theorem).
			Demonstrate and apply various formulas in
			problem-solving situations. Explain and apply
			the appropriate formula to determine length,
			midpoint, and slope of a segment in a
Rocket Activity (pgs.			coordinate plane (i.e., distance formula,
69-75)	MS	MA.8-9.TA.4.b	Pythagorean Theorem).
		Pushing the Env	
		2007 Mathema State Framewo	
Mississippi Mathema	atice	State Framewo	UINS UINS
Grades 8-10	100		
Activity/Lesson	State	Standards	
	1		
			Demonstrate and apply various formulas in
,			Demonstrate and apply various formulas in problem-solving situations. Solve real-world
Types of Engines (			Demonstrate and apply various formulas in problem-solving situations. Solve real-world problems involving formulas for perimeter, area,

			Demonstrate and apply various formulas in problem-solving situations. Explain and apply the appropriate formula to determine length,
			midpoint, and slope of a segment in a
Types of Engines (			coordinate plane. (i.e., distance formula,
pgs. 11-23)	MS	MA.8-10.Al.4.b	Pythagorean Theorem).
Chemistry (pgs. 25-41)	MS	MA.8-10.Al.4.a	Demonstrate and apply various formulas in problem-solving situations. Solve real-world problems involving formulas for perimeter, area, distance, and rate.
Chemistry (pgs. 25-41)	MS	MA.8-10.Al.4.b	Demonstrate and apply various formulas in problem-solving situations. Explain and apply the appropriate formula to determine length, midpoint, and slope of a segment in a coordinate plane. (i.e., distance formula, Pythagorean Theorem).
,			Understand, represent, and analyze patterns,
			relations, and functions. Explain and illustrate
			how a change in one variable may result in a
			change in another variable and apply to the
Physics and Math			relationships between independent and
(pgs. 43-63)	MS	MA.8-10.AI.2.d	dependent variables.
			Understand how algebra and geometric
			representations interconnect and build on one
Physics and Math			another. Solve problems that involve
(pgs. 43-63)	MS	MA.8-10.AI.3.b	interpreting slope as a rate of change.
			Demonstrate and apply various formulas in
Discosion and Made			problem-solving situations. Solve real-world
Physics and Math	MC	MA.8-10.AI.4.a	problems involving formulas for perimeter, area,
(pgs. 43-63)	MS	IVIA.8-10.AI.4.a	distance, and rate.
			Demonstrate and apply various formulas in problem-solving situations. Explain and apply
			the appropriate formula to determine length,
			midpoint, and slope of a segment in a
Physics and Math			coordinate plane. (i.e., distance formula,
(pgs. 43-63)	MS	MA.8-10.AI.4.b	Pythagorean Theorem).
(690: 10 00)		1111 110 1011 11.41.0	Demonstrate and apply various formulas in
			problem-solving situations. Solve real-world
Rocket Activity (pgs.			problems involving formulas for perimeter, area,
69-75)	MS	MA.8-10.AI.4.a	distance, and rate.
			Demonstrate and apply various formulas in
			problem-solving situations. Explain and apply
			the appropriate formula to determine length,
			midpoint, and slope of a segment in a
Rocket Activity (pgs.			coordinate plane. (i.e., distance formula,
69-75)	MS	MA.8-10.AI.4.b	Pythagorean Theorem).